1.	Record Nr.	UNINA9910254079303321
	Autore	Hesthaven Jan S
	Titolo	Certified reduced basis methods for parametrized partial differential equations / / by Jan S Hesthaven, Gianluigi Rozza, Benjamin Stamm
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
	ISBN	3-319-22470-0
	Edizione	[1st ed. 2016.]
	Descrizione fisica	1 online resource (139 p.)
	Collana	SpringerBriefs in Mathematics, , 2191-8198
	Disciplina	515.353
	Soggetti	Computer mathematics
		Partial differential equations
		Applied mathematics
		Engineering mathematics
		Mathematical physics
		Computational Mathematics and Numerical Analysis
		Partial Differential Equations
		Mathematical and Computational Engineering
		Theoretical, Mathematical and Computational Physics
		Applications of Mathematics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di contenuto	1 Introduction and Motivation -- 2 Parametrized Differential Equations -- 3 Reduced Basis Methods -- 4 Certified Error Control -- 5 The Empirical Interpolation Method -- 6 Beyond the Basics -- 7 Appendix A Mathematical Preliminaries.
	Sommario/riassunto	This book provides a thorough introduction to the mathematical and algorithmic aspects of certified reduced basis methods for parametrized partial differential equations. Central aspects ranging from model construction, error estimation and computational efficiency to empirical interpolation methods are discussed in detail for coercive problems. More advanced aspects associated with time-dependent problems, non-compliant and non-coercive problems and applications with geometric variation are also discussed as examples.